

## The Indispensability of Information and Communication Technology (ICT) Components as Panacea in Checking Bank Crimes and Improving Customers Service Delivery in Ghana

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### Abstract

The study investigates the indispensability of ICT as a panacea in checking bank crimes and improving customers' service delivery in Ghana Eco-Bank and Barclays Bank. In carrying out the research, survey design was adopted. The target population comprised all the bank customers in the three Northern Regions of Ghana, but because of time and financial constraints the sample is limited to Eco-Bank and Barclays Bank, Tamale branches. One hundred customers in each branch was randomly selected, also 25 bank officials were purposively selected in each branch. Altogether, 200 bank customers and 50 bank workers constitute the sample for this study. Two research instruments which were self-constructed by the researchers were used to collect the data. The data collected were subjected to statistical analysis such as mean, mode, media, Standard deviation, frequency count, percentage spread etc. The main statistical method used to answer the research questions is one-way analysis of variance (ANOVA). From the data analysis result, it was found that ATM service, SMS banking, E-zwich services, telephone banking and Internet banking are the electronic banking products being offered by Eco-Bank and Barclays bank and patronized by customers. Based on the findings, it was concluded that electronic banking products have impacted positively on the service delivery of the Eco-Bank and Barclays Bank and that customers' perception has greatly changed as a results of the products. Based on this finding, it is recommended that the place of ICT in the financial sector cannot be over-emphasized. Management of both banks should invest massively in ICT in order to further promote efficient and effective service delivery. Sensitization of customers on the use of electronic services such as internet banking, SMS (mobile) banking and e-zwich banking services which are not well patronized.

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**Keywords:** ICT, electronic banking, ATM, Telephone Banking, Master Cards

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### INTRODUCTION

In sub-Sahara Africa, Ghana in particular, development in Information and Communication Technology (ICT) are radically changing the way business is done. The usage of Information Technology (IT) broadly referring to computer and peripheral equipment has been tremendous growth in service industries in the recent past. The most obvious example is perhaps the banking industry where the introduction of (IT) related products in internet banking, electronic payment security investment, information exchanges. (Berger, 2003), banks can now provide more diverse services to their customers through the help of ICT.

Information and communication technology was broadened to include information exchange not only among men but also among machines as well as the exchange of signals in the animal and plant worlds. The place of change brought by new technology has had a significant effect on the way people live, work and play globally. Waherem (2000), today's banking

environment is very dynamic and experiences rapid changes as a result of creativity, innovation, technological changes, increased awareness and demands from customers. Business organization especially the banking industry of the 21<sup>st</sup> century operates in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate with information and communication technology (ICT) is at the centre of the global change curve. Landon and Landon (1991) contend that managers cannot ignore Information System because they play a critical role in contemporary banking organization. The application of communication technology concept techniques, policies and implementation strategies in banking services has become a subject of fundamental importance and concern to all banks and a programme for local and global competitiveness. ICT directly affects the various management function of planning, organizing and the nature of services offered in the banking industry. It had continuously changed the way banks organized their corporate

relation worldwide with the variety of innovative service available to enhance the speed and quality of service delivery.

The Ghana banking industry is undergoing rapid changes as a result of technological innovative increased awareness and demands from customers. ICT is a digital processing and utilization of information by the use of electronic computers. It comprises the storage, retrieval, conversation and transmission of information (Ifueko, 2011). Banking is an information intensive activity that rely much on information and communication technology (ICT). Banking need information technology to acquire, process and deliver relevant information to clients. This is led to the adoption of e-banking by various banks throughout the world. The type of e-banking services provided by the Eco-bank and Barclays Bank are internet banking, e-alert, sms-mobile banking, e-zwich and ATM cards, debits and credit cards. E-banking therefore refers to the provision of banking products and services through electronics delivery channels. It started with the introduction of Automated Teller Machine (ATM) and telephone transaction (Papa, 2003). In recent times the banking business has evolved through the introduction of the internet in 1969 (Nehmzow, 1997).

Irechukwu (2001), lists some banking services that have been revolutionized through the use of ICT as including account opening, customer account mandate and transaction processing and recording. ICT has provided self-service facilities (automated customer service machine) from where prospective customer can complete their account opening documents direct online. It assists customers to validate their account numbers and receive instruction on when and how to receive their cheque books, credit and debit card. ICT has changed the way of conducting business transactions and meeting the growing demands of customers for most organizations including banks.

Today's business environment is very dynamic and undergoes rapid changes as a result of technological innovation, increased awareness and demands from customers. Business Organization especially the banking industry of the 21<sup>st</sup> century appears in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate. Information and communication technology (ICT), is at the center of global change. Harold and jeff (1955), contend that financial service providers should modify their traditional operating practices to remain viable in the 1990s and the decades that follow. They claim that the most significant shortcoming in the banking industry today is a widespread failure on the part of senior management in banks to grasp the importance

of technology and incorporate it into their strategic plans accordingly.

Woherem (2000), claimed that only banks that overhaul the whole of their payment and delivery system and apply ICT to their operation are likely to service and prosper in the new millennium. He advises banks to re-examine their services and delivery system in order to properly position them within the framework of the dictates of the dynamism of information and communication technology. Ghana banking sector has been tremendous increase in advancement in information and communication technology in the past decade. The quest for survival global relevance maintenance of existing market share and sustainable development has made exploitation of the many advantages of ICT through the use of automated devices imperative in the industry. Information Technology IT has been defined as the usage of computers, digital technology in various fields of production and services. In the banking sector it is used in concepts like internet banking, automated teller machine (ATM), and Debit & Credit card etc. It is a general term used for utilizing of electronic technology for business information processes in all levels.

Bank fraud is the use of potentially illegal means to obtain money, assets, or other property owned or held by a financial institutions or to obtain money from depositors by fraudulently posing as a bank or other financial institutions. In many instances, bank fraud is a criminal offence. While the specific elements of particular banking fraud laws vary depending on jurisdictions, the term bank fraud applies to actions that employ a scheme or artifice as opposed to bank robbery or theft. For this reason, bank fraud is sometimes considered a white-collar crime. And some of the types of bank-fraud are credit card fraud, forged cheque, fraud electronic and bank fraud identity, impersonation fraud, computer and internet fraud, advance fee fraud, accounting fraud, money transfer fraud and fraudulent loan, master card cloning, ATM cloning, voucher manipulation, visa card cloning, etc.

#### **Statement of Problem**

The rapid population in African Countries and the world at large has brought heavy volume of trade and bank transaction across the globe. The advent of big volume of bank transaction has brought with it various challenges like impersonation cheque falsification, issuance of dual-cheque and forgery of signature and cloning of monetary documents. As a results of these negative activities, millions of Ghana cedis have gone to the wrong or illegal hands or to fraudsters. This problem could not be allowed to continue if banks would continue to command customers confidence reposed on it as a saving custodian. The emergence of ICT components into

banking operation has alleviate these intractable problems. Therefore, this study is sought to investigate the indispensability of information and communication technology (ICT) components as panacea in checking Bank crimes and improving customers service delivery in Ghana.

### Research Questions

Based on the research problems raised, the following questions will answer the fundamental problems in the study.

- i. What are the various components of ICT products used in Eco-Bank and Barclays Bank?
- ii. Has the introduction of ICT components significantly affected service delivery in Eco-Bank and Barclays bank?
- iii. Have customers been significantly satisfied on the usage of ICT components in Eco-Bank and Barclays Bank?

### Research Hypotheses

- i. Introduction of ICT component does not have significant effect of service delivery in Eco-Bank and Barclays Bank.
- ii. Customers have been significantly satisfied on the usage of ICT components in Eco-Bank and Barclay Bank.

### Significance of the Study

This is an empirical study, no doubt its outcomes will benefit many related stakeholders in banking industry tremendously.

- Bank customers of all categories will benefit from the outcomes of this study in enhancing ICT components in saving, withdrawing and sending their monies to various destinations through ICT components.
- Bank officials at all levels will use the availability of these components in satisfying their customers and to improve the service delivery.
- Ministry of finance through their officials will use the empirical literature in this study to formulate customers' friendly policies that will enhance positive relationship between banks and customers.
- Bank of Ghana (BoG) as banker to all other banks in Ghana will benefit from the empirical strategies contained in this study to improve and enhance workable strategies to all banks which instill customers' confidence as the safest places where their treasures could be kept.

### Objectives of the Study

The general objective of this study is to investigate the indispensability of ICT components as panacea in

checking bank crimes and improving customers service in Ghana.

### RESEARCH METHODOLOGY

**Research Design:** The research design adopted for this study is survey. Survey research design according to Olaewe (2016) is a situation or condition where an item of information or a unit of events is studied in detail so as to generalize the outcomes on the universal or entire population. Survey research studies large and small population (or Universe) by selecting and studying samples chosen from the population to discover the relatives incidence, distribution and interrelation of sociological and psychological variables. As such it can be classified as field studies with a quantitative orientation. Survey research is considered to be a branch of social scientific research which immediately distinguishes it from status survey. Survey research is interested in the accurate assessment of the characteristic of whole population of people. These attribute are related to the focus of this study for better analysis, hence it's adoption. Kerlinger and Lee (2000).

**Population and Sample:** The target population for this study comprised all bank customers in Eco-bank and Barclays bank in Tamale. However, because of time and financial constraints, 100 bank customers were randomly selected each from Eco-bank and Barclays Bank – Tamale branches. 25 bank officials were purposively selected from each bank. Altogether, 200 customers and 50 bank officials constitute the sample and accessible population for this study.

### Instrumentation

Two research instruments which were self-constructed by the researchers were used to collect the /data for this study, they are

- i. Ghana Banks' staff Questionnaire
- ii. Ghana Banks' Customers Questionnaire

### Reliability of the Instruments

The two instruments after construction were trial tested on another parallel population in Upper West Region (WA) branches of the two banks. After trial testing of the instruments, some item were reworded, partly modify or completely removed. Test-re-test method of reliability was employed on the results obtained, the splift-half method ( $r^{1/2}$ ) was used. Reliability coefficient of 0.82 and 0.76 were obtained, an indication that the instruments were strongly reliable.

### Validity of the Instrument

After construction, the instruments were compared with other similar instruments along with other related studies, the responses yielded were strong and positive.

**Data Collection Procedure**

The two instruments were personally administered on the respondents (Eco-Bank and Barclays Bank officials) and their customers, the instruments were collected back instantly so as to ensure 100% return.

**Statistical Analysis Procedure**

The data collected were subjected to statistical analysis such as mean, mode, median, frequency counts, percentage spread etc. The main statistical method used to answer the research questions is one-way analysis of variance (ANOVA) and t-test statistics respectively.

**DATA ANALYSIS AND DISCUSSION  
Demographic Characteristics of Bank Staff**

Table 1: Gender of Banks Staff table

Gender	Freq	Percentage (%)
Male	32	64
Female	18	36
Total	50	100

Source: Field survey 2017

The analysis of table 1 above indicates that 32 (64%) of the banks’ workers comprise male while 18 (36%) of them were females. It shows that bank officials in the two banks were predominantly male

Table 2: Banks staff by their Age distribution

AGE	Frequency	Percentages
26-30	20	40
31-35	16	32
36-40	10	20
41-45	4	08
Total	50	100

Source: Field survey, 2017

Table 2, above shows the age distribution of the respondents, 20(40%) of them are 26-30 years, 16(32%) belongs to 31-35 years, 10(20%) belong to 36-40 years while 4(08%) of the banks workers belong to the age distribution of 41-45 years. It implies that the majority of the two banks workers were in age bracket of 26-30 years.

Table 3: Respondents by their Qualification

Educational level	Frequency	Percentages
Diploma/HND	28	56%
First degree	16	32%
Masters degree	6	12%
Total	50	100%

Source: field survey 2017

Table 3 above shows that 28(56%) of the banks officials are holders of Diploma including higher Diploma, 16(32%) of them have first degree while 6(12%) of them hold masters’ degree. It could be

deduced here that majority of the two banks workers are holders of diploma and higher diploma.

Table 4: Has ICT components in banks improved service delivery of Barclays and Eco-Banks

Strongly agree	Agree	Disagree	Strongly Disagree
14	6	-	-
16	14	-	-
30	20	-	-

Source: Field survey 2017

Strongly agree and agree = agree

Agree responses: 50

From the above table 4, it can be deduced that 50(100%) of the bank workers agree ICT components used in their banks have improved customers service delivery. It implies that ICT has improved productivity, innovation and creativity in the banks’ services. ICT has improved service delivery in Barclays and Eco-Banks respectively.

Table 5 Has ICT components been able to detect the fraud?

Yes	25	25	50
No	-	-	-

Source: Field survey 2017

In the table 5, above, it could be observed that 50 (100%) of the banks officials agreed that ICT components in the bank is capable enough to detect bank fraud, it is clearly indicated that ICT is strong tools that can detect fraud in the bank, 50(100%) which were “agree on yes”, agreed that ICT has been able to detect fraud in the bank.

The rate at which information and communication technology ICT is being applied to penetrate crimes in Ghana banks is becoming worrisome. The amount of money being lose to the activities of fraudsters adopting sophisticated methods to defrauding unsuspected banks’ customers surpass that of traditional ways of saving money. With the introduction of ICT components to bank, services have set another pace for unprecedented fraudsters activities.

Table 5 Has the Introduction of ICT components significantly affected service delivery?

Question Items	Strongly Agree	Agree	Disagree	Strongly Disagree	
8	72	44	18	66	200
9	44	76	44	36	200
10	84	52	48	16	200
11	58	74	44	36	200
12	68	82	20	30	200
13	74	114	8	4	200
14	90	46	8	6	200

Source: Field survey 2017

Table 5 above shows the respondents responses from the questionnaires for the customers. ICT products used in the bank include Automated Teller Machine (ATM), Smart cards, telephone banking, Visa Card, Master Card, Electronic Funds Transfer, Electronic data interchange, Electronic House and Offices Banking

**ANOVA**

**Table 6: Summary Table**

Source of variation	SS	Df	MS	F
Between group	15552	3	5184	
Within group	9672	24	.403	12.86
Total	25224	27		

Source: Field survey 2017

$F_c = 12.86$  and  $F_t(3,24) = 3.10$

Since  $F_c > F_{critical}$

$12.86 > 3.10$  therefore we reject the null hypothesis and conclude that the test is significant.

Therefore, the introduction of ICT has significantly affected positively the service delivery of Eco-Bank and Barclays bank respectively. The application of information and communication technology ICT components techniques policies and implementation strategies to banking services has become a subject of fundamental important and concern to all banks and indeed a prerequisite for local and global competitiveness. ICT directly affects how managers decide how they plan and what products and services are offered in the banking industry. It has continued to change the way banks and their corporate relationship are organized worldwide and the variety of innovation devices available to enhance the speed and quality of services delivery.

The findings is in line with Harold and Jeff (1995), who stressed that financial service providers should modify their traditional operating practices to remain viable in the 1990s and the decades that follows. They claim that the most significant shortcoming in the banking industry today is a widespread failure on the part of senior management in bank to grasp the importance of technology and incorporate it into their strategic plan accordingly.

**Limitation of the Study**

This study is limited to only banks that have provision for and using ICT components. Those banks that are still using manual calculation and analog banking are not included. Those banks that have no facilities for electronic banking (e-banking) nationally and internationally are not included in this study.

**CONCLUSION**

From the foregoing analysis and deductions, it is hereby highlighted that automated teller machine

(ATM) services, Short-message service (SMS), E-Zwhich services, Telephone banking and Internet banking etc, are among the major component of electronic banking product being offered by Eco-Bank and Barclay Bank in Ghana. Also that the customer perception has greatly changed as a result of availability of these products. It is concluded therefore that, ICT component in financial and banking sectors are indispensable to electronic banking in particular and financial world in general.

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